REMARKS

Claims 1-21 were pending in the present application, all of which stand rejected. This response amends Claims 1, 8, and 15. No claims are added or canceled. Accordingly, Claims 1-21 are currently under consideration.

The Amendments to Claims 1, 8, and 15 are supported at least by Figure 8B and related text in the specification as filed. These amendments are not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter has been added.

Specification

The Office alleges that the incorporation by reference of several patent applications cited in ¶1 is ineffective because the reference documents were allegedly not clearly identified as required by 37 CFR 1.57(b)(2). (Office Action, §1). As is conventional, the cited patent applications were identified in the specification as filed by title and attorney docket number because their serial numbers were not yet available. This response amends ¶1 to substitute the serial number and filing date of each patent application for the attorney docket number. The correspondence between the attorney docket numbers and the patent application serial numbers and filing dates can be verified with the PAIRS system, for example. Hence, no new matter has been added.

Applicants respectfully submit that the incorporation by reference in ¶1 satisfies the requirements of 37 CFR 1.57(b)(2), and request that the Office acknowledge the effectiveness of this incorporation by reference.

Claim Rejection Under 35 U.S.C. § 112

Claims 15-21 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. The Office apparently alleges that "a medium storing computer programs" as recited in Claim 15 was not "described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." (Office Action, §2).

Applicants traverse this rejection. "[A] medium storing computer programs" is supported in the present application at least at ¶26, which discloses a "memory 704" that "may include high speed random access memory and may also include non-volatile memory, such as one or more magnetic disk storage devices," and in which the computer programs recited in Claims 15-21 may be stored. One of ordinary skill in the art would also recognize that other conventional media for storing computer programs known to one of ordinary skill in the art, including but not limited to conventional floppy disks and CDs, for example, may also be suitable in some variations.

Claims 15-21 stand rejected under 35 U.S.C. 112, first paragraph, as allegedly based on a disclosure which is not enabling. The Office alleges that "[t]he specification and claims fail to disclose what the applicant regards as appropriate computer medium." (Office Action, §2).

Applicants traverse this rejection, as well. As noted above, the specification discloses at ¶26 a memory 704 which may include various media in which the programs recited in Claims 15-21 may be stored. One of ordinary skill in the art would also recognize that other conventional media for storing computer programs may also be suitable in some variations. Consequently, one of ordinary skill in the art would be able to make and use the inventions of Claims 15-21 without undue experimentation.

Hence, Applicants respectfully request that the Office withdraw the rejections under 35 U.S.C. § 112.

Claim Rejection Under 35 U.S.C. § 101

Claims 1-21 are rejected under 35 U.S.C. 101 because the claimed invention is allegedly directed to non-statutory subject matter.

"Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101." (MPEP §2106(II)(A), emphasis added) Under this test, "[a] claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful." (MPEP §2106(IV)(B)(2)(b), part ii). For example:

"transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' – a final share price ...." (MPEP §2106(II)(A); citing *State Street*, 149 F.3d at 1373).

The Office alleges that "there is no evidence that simulating the group circuit produces a tangible result." (Office Action, §3) Applicants disagree. As one of ordinary skill in the art would recognize, the result of "simulating a circuit" as recited in Claims 1-21 is the predicted behavior of the circuit. (¶2-3). Referring to Figure 1A of the present application, the simulation results (i.e., the predicted behavior) may be displayed, for example, "in the form of waveforms, measurement, or checks 110 on a computer screen for engineers to inspect ...." (¶4) These simulation results may be used to detect and correct design errors and to optimize design parameters, for example. (¶3) Thus, similarly to the process in State Street, "simulating a circuit" as recited in Claims 1-21 is a practical application in the technological arts because it transforms data (e.g., a netlist description of the circuit) into a useful, concrete, and tangible result - simulation results such as, for example, waveforms or measurements. In particular, these simulation results are useful, concrete, and tangible in the same sense as was the final share price (a calculated number) cited in *State Street*.

Hence, Applicants respectfully request that the Office withdraw the rejection under 35 U.S.C. 101.

Claim Rejection Under 35 U.S.C. § 102

Claims 1-21 are rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Zhou et al. (U.S. Patent No. 6,807,520).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 1 USPQ2d 1051, 1053 (Fed. Cir. 1987). Claims 1, 8, and 15, as amended, distinguish over Zhou et al. at least by reciting "creating a dynamic database for representing the group circuit, the dynamic database including references to corresponding branches

of the hierarchical data structure in the static database for fetching topology information dynamically during simulation...."

The Office alleges that Zhou et al. teaches, at column 13, lines 17-27 and in Figure 10, "creating a dynamic database," as recited above. (Office Action, §4). The Office is mistaken. Zhou et al. nowhere discloses a "dynamic database" as recited in Claims 1, 8, and 15. In particular, Zhou et al.'s dynamic data structures 520a-520d, apparently referred to by the Office, are not part of such a "dynamic database." Merely storing dynamic information is not sufficient to create a "dynamic database" as described in the present application and recited in Claims 1, 8, and 15.

A "dynamic database" as recited in Claims 1, 8, and 15 and described elsewhere in the specification allows dynamic merging and/or splitting of circuits it represents during the simulation. For example, Figure 9C and ¶37-¶39 of the present application show and describe dynamic splitting, merging, and regrouping of circuits represented by the dynamic database as allowed in some variations.

Zhou et al. explicitly states that the dynamic information referred to at col. 13, lines 7-27 "is stored in a flattened way." (col. 13, line 25, emphasis added). This flattening manifests itself in Figure 10, for example, which shows the sharing of information occurring at the data cell level. One of ordinary skill in the art would understand that instant cells in a flattened circuit may no longer be merged or split dynamically. Hence, Zhou et al. does not disclose "creating a dynamic database" as recited in Claims 1, 8, and 15.

As amended, Claims 1, 18, and 15 further distinguish over Zhou et al. by reciting "the dynamic database including references to corresponding branches of the hierarchical data structure in the static database ...." (emphasis added). As noted above, in Zhou et al. the dynamic information is stored in a flattened way, which collapses hierarchical data structures and thus eliminates hierarchical branches. Consequently, the alleged "dynamic database" identified by the Office in Zhou et al. does not include hierarchical branches. This is apparent from Zhou et al.'s Figure 10, for example, which shows only the data cell level of dynamic data structures. Since the

alleged "dynamic database" in Zhou et al. does not include hierarchical branches, it cannot include "references to corresponding branches of the hierarchical data structure in the static database."

Claims 2-7, 9-14, and 16-21 each distinguish over Zhou et al. at least by their direct or indirect dependence on one of independent Claims 1, 8, and 15. Hence, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102.

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CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Office is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 188122001500. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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